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In re Application of:
Kenneth Lawrence Accardi et al.

Serial No.: 09/199,506

Filed: November 25, 1998

For: MEDICAL DIAGNOSTIC SYSTEM
SERVICE METHOD AND APPARATUS§
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Group Art Unit: 2152

Examiner: Jaroenchonwanit, B.

Atty. Docket: GEMS:0029/YOD
15-SV-4769Assistant Commissioner
for Patents
Washington, D.C. 20231CERTIFICATE OF MAILING
37 C.F.R. 1.8I hereby certify that this correspondence is being deposited with the U.S.
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January 2, 2003

Date

Carla Deblaw
Carla Deblaw**REVISED APPEAL BRIEF PURSUANT
TO 37 C.F.R. §§ 1.191 AND 1.192**

This Revised Appeal Brief is being filed in response to the Notification of Non-Compliance mailed December 2, 2002, and in furtherance to the Notice of Appeal mailed on July 9, 2002, and received by the Patent Office on July 16, 2002.

1. REAL PARTY IN INTEREST

The invention is under an obligation of assignment to: GE Medical Technology Services, Inc., a Delaware corporation, N25W23255 Paul Road, Pewaukee, WI 53072.

2. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal. GE Medical Technology Services, Inc., the Assignee of the above-referenced application, as

evidenced by the obligation of assignment mentioned above, will be directly affected by the Board's decision in the pending appeal.

3. **STATUS OF CLAIMS**

Claims 1-44 are currently pending, and claims 1-44 are currently under final rejection and, thus, are the subject of this appeal.

4. **STATUS OF AMENDMENTS**

All amendments made to the claims have been entered. No amendments have been made following the Final Office Action mailed April 9, 2002.

5. **SUMMARY OF THE INVENTION AND OF THE DISCLOSED EMBODIMENTS**

The present invention relates generally to the field of medical diagnostic and imaging systems. See Application, page 1, lines 6-7. More particularly, the invention relates to interactive servicing of such systems, such as via remote service facilities, in which system configurations, image data and other files, protocols, service requests, reports and other useful information can be exchanged interactively between a remote service facility and the diagnostic system. See Application, page 1, lines 7-11. In this field, medical diagnostic systems typically included circuitry for acquiring image data and for transforming the data into a useable form, which was then processed to create a reconstructed image of features of interest within the patient. See Application, page 2, lines 1-3.

Medical diagnostic systems are often called upon to produce reliable and understandable images within demanding schedules and over a considerable useful life. See Application, page 2, lines 11-13. To ensure proper operation, the systems are serviced regularly by highly trained personnel who address imaging problems, configure and calibrate the systems, and perform periodic system checks and software updates. See Application, page 2, lines 13-16. Moreover, service offerings have been supplemented in

recent years by remote service centers capable of contacting scanners at subscribing institutions directly without the need for intervention on the part of the institution personnel. See Application, page 2, lines 16-19. Such remote servicing is intended to maintain the diagnostic systems in good operational order without necessitating the attention of physicians or radiologists, and is often quite transparent to the institution. See Application, page 2, lines 19-21.

While such service techniques have proven extremely valuable in maintaining diagnostic systems, further improvements are still needed. See Application, page 2, lines 23-24. For example, in conventional service systems, contact between the scanners and a centralized service center most often originates with the service center. See Application, page 2, lines 24-26. The scanners are provided with only limited functionality in the ability to identify and define service needs. See Application, page 2, lines 26-28. Even where the scanners have permitted some limited ability to contact networked service providers, intermittent conditions indicative of a potentially serviceable problem may cease by the time the service provider is contacted or recontacts the scanner after a service call. See Application, page 2, lines 28-31. Moreover, although the transparency of interactions between scanners and service centers avoids unnecessarily distracting medical personnel with service updates, it has become apparent that some degree of interaction between service centers and institutions would be highly desirable. See Application, page 2, line 31 to page 3, line 4. In particular, an interactive service system would facilitate valuable exchanges of information, including reports of system performance, feedback on particular incidents requiring attention, updates of system licenses, software, imaging protocols, and so forth. See Application, page 3, lines 4-7. Currently available service systems do not permit such interactive exchanges. See Application, page 3, lines 7-8.

In addition to the foregoing drawbacks, conventional scanners are not suitably adapted to support user-friendly, scanner-based service exchanges. See Application, page 3, lines 9-10. User interfaces in such scanners typically only permit limited access to service information, and do not provide a particularly useful interface for identifying and defining

serviceable conditions as they occur. See Application, page 3, lines 10-13. Moreover, software platforms and interfaces in conventional scanners are not suitable for interaction with service centers, and generally exclude the user from communications between the scanner and the service center or, conversely, impose unnecessarily on the user by requiring intervention for certain service functions such as software updates or downloads. See Application, page 3, lines 13-17. Furthermore, platforms have yet to be developed that can serve as a basis for interactive servicing needs of different modalities. See Application, page 3, lines 18-19. Rather, such platforms have traditionally been specifically designed for the needs of a particular modality or even a particular scanner with little cross utility between systems or modalities. See Application, page 3, lines 19-21.

While improvements in diagnostic stations have been made for certain modalities, these are still insufficient to satisfy the current need. See Application, page 3, lines 23-24. For example, graphical user interfaces are available for specific modality scanners, such as ultrasound scanners, which enable software downloads and remote access to images. See Application, page 3, lines 25-27. The remote access features are, however, generally limited to transmitting image configurations and image data for reconstruction between remote physician workstations and the scanner. See Application, page 3, lines 27-29. At the time of the invention, available systems did not provide for exchanging information on possible service problems with the scanners, or information or data log files for the purpose of providing remote service of the scanner itself. See Application, page 3, lines 29-32.

Despite the need for improved techniques for providing reports and interactive feedback with service activities and operational status of the systems, no satisfactory solution had yet been proposed prior to the present techniques. The Appellants have developed techniques to solve one or more of the problems described above. The Appellants provide an interactive servicing technique for medical diagnostic equipment designed to respond to these needs. See Application, page 4, lines 5-6. The technique offers a straightforward and user-friendly environment for identifying and requesting service for potential problems occurring at the scanner, which may be either recurring in nature or

intermittent. See Application, page 4, lines 6-9; Figs. 4-11. The technique may be applied on a variety of scanner modalities, and offers a uniform interface, platform and system architecture across modalities. See Application, page 7, lines 15-23. Thus, the system may be easily adapted to permit a remote service facility 22 to provide high quality service to different diagnostic equipment 12 regardless of the modality, model, or even the manufacturer. See Application, page 7, lines 23-25. Moreover, a wide array of service functions may be incorporated into systems 12 based upon the technique. See Application, page 7, line 27 to page 8, line 3. For example, service functions such as imaging system troubleshooting and exchange of service call requests and results may be a basic feature provided in the systems 12. See Application, page 11, lines 7-13. In addition, messaging functions permitting two-way communication directly from the scanner 26 and 42 or from a centralized radiology management station 70 at an institution 20 are facilitated. See Application, page 11, lines 19-32. Such messaging may be used for communicating the requests and service call results, providing reports on both technical and business or financial data, reviewing, renewing or extending licenses, updating or downloading new system software and imaging protocols, accessing remote training schedules and programs, and so forth. See Application, page 12, lines 14-22 and page 29, line 27 to page 30, line 12.

In a presently preferred system architecture, the technique provides an interactive interface installed at the scanner 26 and 42. See Application, page 11, lines 24-27. The interface permits the user to navigate through pages for identifying and reporting serviceable problems at the scanner 26 and 42. See Application, page 19, lines 20-29; and Figs. 6-11. The interface also may permit the user to request information such as training programs, software updates, imaging protocols, and so forth. See Application, page 29, line 27 to page 30, line 12 and page 30, line 28 to page 31, line 2.

Service requests and other messages from the scanner 26 and 42 are transmitted to a centralized service facility 22 via a remote networking system 80, such as an intranet or internet. See Application, page 10, lines 14-17. The service facility 22 receives such messages and interacts with the scanner 26 and 42 to inform the scanner 26 and 42 that the

request has been received and is being processed. See Application, page 16, lines 11-23. The software platform 90 at the scanner 26 and 42 then facilitates the exchange of image and other file data with the remote service facility 22 for analysis of system parameters, imaging problems, and so forth. See Application, page 21, lines 14-26. Results of the analyses can then be transmitted directly to the scanner 26 and 42 to inform the institution 20 of the causes and possible corrective actions. See Application, page 33, line 27 to page 34, line 4.

The system also allows the service center to execute proactive or reactive sweeps of scanners 26 and 42 to collect information useful to analyze the performance of the scanner 26 or 42 as well as to compare its performance to that of other scanners 26 or 46. See Application, page 32, lines 25-32. Moreover, such sweeps may be used to collect information useful in predicting future service needs, such as x-ray tube replacement and so forth. See Application, page 31, lines 19-26 and page 33, lines 14-25.

6. **ISSUES**

Issue No. 1:

Whether claims 1-6, 8-13, 15-23, and 25-44 are unpatentable under 35 U.S.C. §103(a) as being obvious by Jago et al. (U.S. Patent No. 5,938,607) in view of Friz et al. (U.S. Patent No. 5,786,994).

Issue No. 2:

Whether claims 7, 14, and 24 are unpatentable under 35 U.S.C. § 103(a) as being obvious by Jago et al. (U.S. Patent No. 5,938,607) in view of Friz et al. (U.S. Patent No. 5,786,994) and Love et al. (U.S. Patent No. 5,629,871).

7. **GROUPING OF CLAIMS**

In regard to Issue No. 1, independent claims 1, 8, 15, 22, 29, and 36 will stand or fall independently of one another. Dependent claims 2-6, 9-13, 16-21, 23, 25-28, 30-35, and 37-44 will stand and fall with their respective independent claims.

In regard to Issue No. 2, dependent claims 7, 14, and 24 will stand with their respective independent claims, but will not fall with them.

8. **ARGUMENT**

Issue No. 1:

The Examiner rejected claims 1-6, 8-13, 15-23, and 25-44 under 35 U.S.C. § 103 (a) as being unpatentable over Jago et al. (U.S. Patent No. 5,938,607) in view of Friz et al. (U.S. Patent No. 5,786,994). Appellants respectfully traverse this rejection.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated

disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

As discussed in detail below, the Examiner has improperly rejected the foregoing claims. The Examiner has misapplied long-standing and binding legal precedents and principles in rejecting the claims under Section 103(a). Accordingly, Appellants respectfully request full and favorable consideration by the Board, as Appellants strongly believe that claims 1-6, 8-13, 15-23, and 25-44 are currently in condition for allowance.

In addition, in some of the foregoing rejections, the Examiner argued that several unique features of the present claims are allegedly “well known in the art.” The Appellants have seasonably traversed the Examiner’s use of Official Notice and maintain that the pending claims are patentable over the cited references taken alone or in combination. The Appellants have respectfully requested the Examiner to cite specific references, passages or figures to support the contention that certain elements are allegedly *suggested* by the references and, also, to provide support under M.P.E.P. § 2144.03 for the explicit and apparent assertions that certain elements are “well known in the art.” In those rejections, the Examiner has failed to provide support for the elements that are allegedly “well known in the art.”

Furthermore, it should be further noted that independent claims 1, 8, 15, 22, 27, 29, and 36 are each directed to a different aspect of the present invention. Claim 1 recites a system for servicing a medical diagnostic apparatus, and specifically recites a diagnostic apparatus including a service server for originating a service request for operational servicing and a network server for receiving the service request. Claim 8 recites an apparatus for providing service to medical diagnostic systems, and specifically a plurality of medical diagnostic systems, each diagnostic systems including a diagnostic station with a station interface and communication circuitry for initiating service requests for operational servicing of the diagnostic system. Claim 15 recites a system for remotely servicing medical diagnostic equipment, and specifically recites a service server for

accessing and interactively exchanging data representative of a serviceable operational condition with a first station of a first modality and a second station of a second modality. Further, claim 22 recites a method for providing remote service to a medical diagnostic system, and specifically originating a service request for operational servicing via a user interface in the medical diagnostic system and acknowledging receipt of the service request automatically by the service facility via an electronic message. Claim 29 recites composing a service message on a medical diagnostic system and linking the medical diagnostic system to a remote service facility via a network connection. Claim 36 recites a method for servicing a plurality of medical diagnostic systems, and specifically generating a service request at a first diagnostic system of a first modality and generating a second service request at a second diagnostic system of a second modality. Thus, the claims 1, 8, 15, 22, 27, 29, and 36 each recite subject matter that is directed to a different aspect of the present invention.

Claim 1

Claim 1 recites the following:

A system for servicing a medical diagnostic apparatus, the system comprising:
a diagnostic apparatus including a service server for originating a service request for operational servicing of the diagnostic apparatus and a network communications module for transmitting the service request;
a service facility remote from the diagnostic apparatus, the service facility including a network server for receiving the service request and exchanging data with the diagnostic apparatus in response to the service request.

In the final rejection, the Examiner specifically stated:

Claim 1, Jago disclose the invention substantially, as claimed, including a system for servicing a medical diagnostic apparatus (system 300, fig.2) comprises a diagnostic apparatus (system 10, Fig. 1; system 200, 202, Fig.2), including a service server (an HTTP server 30, browser 100, fig. 1) for originating a service request and a network communication module for transmitting the

service request (TCP/IP module 46, Ethernet connection module 50, fig. 1).

Jago further discloses a service facility remote from the diagnostic apparatus (hospital, which includes physician, locates remotely from the diagnostic apparatus, fig.2; Col. 9, lines 49-58). The facility includes a network server for (viz.) receiving the service request and exchange data with the apparatus in response to the service request (servers (400, 500) communicate with the apparatus (200, 202)).

Jago does not explicitly disclose the requested is an operational servicing of diagnostic apparatus service.

However, in the same field of endeavor, Friz in attempting to prevent endanger patient due to failure of the diagnostic apparatus, overcome government regulatory, and minimizing a complex and time consuming task required to control quality of the diagnostic apparatus (Col. 1, line 63-Col. 2, 67). Friz teaches a system that capable of automatically monitoring quality and performance of the diagnostic apparatus, which includes a System 44 comprises laser image stations, e.g., diagnostic apparatus, remote performance monitoring system 46, e.g., a service server, the system 46 automatically generates error port and initiating request for dispatch of a service technician (Col. 11, lines 3-20), in other words, Friz teaches the system can request a service for the apparatus when failure is detected, which equivalent to request for an operational servicing of diagnostic apparatus service.

The Examiner's rejection of claim 1 fails for at least two reasons. First, the combination fails to include all of the recited features, such as the claimed "a service request for operational servicing of the diagnostic apparatus" and "exchanging data with the diagnostic apparatus in response to the service request." Each of these recited features is missing from the Examiner's suggested combination. Second, the Examiner has failed to provide support for a motivation or suggestion to combine the references.

Recited Features Missing from Claim 1

First with regard to the claimed “service request for operational servicing of the diagnostic apparatus,” the Jago et al. reference and the Friz et al. reference have been carefully reviewed, and specifically the passages relied upon by the Examiner, but the references are believed to be absolutely devoid of any teaching or suggestion of *operational servicing* of the medical diagnostic system via *service requests*, as recited in claim 1. As noted above, claim 1 recites “a service request for operational servicing of the diagnostic apparatus.” With regard to the Jago et al. reference, the Examiner admitted that, “Jago does not explicitly disclose the requested is an operational servicing of diagnostic apparatus service.” Indeed, the Jago et al. reference is limited to techniques for *treating or diagnosing patients*. Jago et al., col. 7, lines 63-66. For example, communications disclosed by Jago et al. relate to patient diagnostic information, demographics, and patient exam reports. Jago et al., col. 8, line 49 - col. 9, line 16. Accordingly, the Jago et al. reference fails to disclose or suggest *operational servicing* or a *service request* in the Appellants’ claims.

Furthermore, the Friz et al. reference fails to include the claimed “service request for operational servicing of the diagnostic apparatus.” The Examiner asserts that the Friz et al. reference is directed to controlling the quality of images to overcome governmental regulation. Indeed, the Friz et al. reference is directed to controlling the quality of images produced from laser imagers, Friz et al., col. 1, line 65 to col. 2, line 3; col. 2, lines 12-26, lines 43-45. However, the reference fails to disclose or suggest a diagnostic apparatus that *originates* a “service request for operational servicing of the diagnostic apparatus.” In the Friz et al. reference, the performance monitoring system does poll the laser imagers and pull the error logs and image test data from the laser imagers, but the laser imager does not *originate* the communication. Friz et al., col. 11, lines 50-56. Furthermore, the raw data that is pulled by the performance monitoring system is not a *service request* as claimed and recited in the present application. Application, page 8, lines 1-10. Thus, the laser imager is being polled by the performance monitoring system to send the raw data, not *originating a service request*. Accordingly, the Jago et al. reference and the Friz et al. reference fail to

disclose or suggest a “service request for operational servicing of the diagnostic apparatus,” as recited in the claims.

As a second missing recited feature, the combination of the references fails to include “exchanging data with the diagnostic apparatus in response to the service request.” As discussed above, the Jago et al. reference does not disclose a “service request for operational servicing of the diagnostic apparatus.” The Examiner asserted that the reference image library 400 and the hospital information system (HIS) or radiology information system (RIS) 500 are equivalent to the presently recited *service facility*. However, the Examiner’s assertion is unsupported for at least two reasons. First, in reference, the systems do not include a *service facility* related with *operational servicing* of medical diagnostic systems as recited in the claims. Indeed, the image library 400 and the hospital information system (HIS) or radiology information system (RIS) 500 are not related to the *operational servicing of the diagnostic apparatus* and would not exchange *service requests* as claimed. In addition to the Examiner’s inaccurate portrayal of the *service facility*, the data in the reference is actually image data, not operational data. In fact, the reference solely refers to different types of images related to techniques for *treating or diagnosing patients*. Jago et al., col. 9, line 49 to col. 10, line 15. The systems 400 and 500 relate to patient exams rather than *operational servicing* of the diagnostic apparatus, as recited in claim 1. Jago et al., col. 10, lines 12-15. Accordingly, the Jago et al. reference fails to disclose or suggest *exchanging data in response* to a *service request* as recited in the claims.

The Friz et al. reference does nothing to cure the deficiencies of the Jago et al. reference. As discussed above, in the Friz et al. reference, the performance monitoring system polls the laser imagers and pulls the error logs and image test data. Friz et al., col. 11, lines 50-56. Indeed, the laser imagers do not *exchange data in response* to a *service request* as claimed, but work in a directly contrasting manner. As recited in the reference, the performance monitoring system controls the access to the data, not the laser imager that merely stores the data. Friz et al., col. 11, lines 30-44. Thus, the Friz et al. reference fails to

teach “exchanging data with the diagnostic apparatus in response to the service request,” because the laser imagers are polled for raw data and do not send requests. In fact, the system disclosed by Friz et al. includes the drawbacks that the present application addresses with conventional scanners. Application, page 2, line 23 to page 3, line 23. Specifically, the problems relate to the fact that conventional scanners rely on the centralized service center and are limited in defining service needs. Application, page 2, lines 24-27. In contrast, the diagnostic apparatus in the claimed subject matter *originates the exchanging of data in response to a service request*. Thus, the Friz et al. and Jago et al. references clearly do not disclose or teach “exchanging data with the diagnostic apparatus in response to the service request.”

No Motivation or Suggestion to Combine the References

Although Appellants maintain that the claim 1 recites various other patentably distinct features, the above-mentioned features are believed to distinguish claim 1 over the Jago et al. and the Friz et al. references cited alone or in the combination proposed by the Examiner. Additionally, the Examiner has failed to point to a convincing suggestion or teaching that would motivate one skilled in the art to modify the Jago et al. reference or the Friz et al. reference. Indeed, the Examiner has failed to meet the required burden of articulating a motivation for the combination of Friz et al. and Jago et al. Instead, the Examiner stated that:

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate a functionality of requesting for operational servicing of the apparatus as taught by Friz with the system in the same filed, which readily equipped with necessary elements with a minor modification as taught by Jago. Because combining them would allow Jago to take advantage as suggested by Friz, which will enable Jago system to operate more efficiently, minimizing operational cost and capable of maintain and control its performance and quality of the system in accordance with government regulatory and finally ensuring safety for services provide to its patient

and minimizing litigation which may cause from unexpected system malfunctions.

This statement is nothing more than an unsupported assertion about the teachings of Friz et al. and Jago et al., not a convincing line of reasoning *why* one of skill in the art would combine the references.

The Federal Circuit recently overturned the Board, which had upheld an examiner's rejection in a similar situation. In the case of *In re Lee*, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002), the examiner rejected the applicant's claims under 35 U.S.C. § 103 without giving the supporting motivation to combine references. The Board subsequently affirmed the examiner's rejection. In overturning the Board's decision, the Federal Circuit stated that:

When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references, "a question of fact drawing on the Graham factors).

'The factual inquiry whether to combine references must be thorough and searching.' *Id.* It must be based on *objective evidence of record*. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. [citations omitted]. *In re Lee*, 61 U.S.P.Q.2d at 1433 (emphasis added).

In the present case, the Examiner's unsupported assertion does not meet the evidentiary standard required for combining references under Section 103. Indeed, the Examiner has impermissibly relied on hindsight, using the teachings of Appellants to find the suggestion to combine the alleged teachings of Friz et al. and Jago et al. The Jago et al. reference is limited to techniques for *treating or*

diagnosing patients. Jago et al., col. 7, lines 63-66. Indeed, the communications disclosed by Jago et al. relate to patient diagnostic information, demographics, and patient exam reports. Jago et al., col. 8, line 49 to col. 9, line 16. The main obstacle addressed in the Jago et al. reference is allowing doctors to share files and images of ultrasounds in diagnosing the patient. Jago et al., col. 1, lines 30-63. The Friz et al. reference simply offers an image quality system, which includes a centralized server that pulls raw data from a group of laser imagers. Friz et al., col. 11, lines 50-56. The Friz et al. reference teaches utilizing a single performance monitoring system to poll the laser imagers with the laser imagers not communicating unless polled. Friz et al., col. 11, lines 55-57. This teaching of a single centralized controller is in direct conflict with Jago et al., which teaches that the ultrasound systems communicate with other devices, such as hospital information systems and reference image library.

Furthermore, the Friz et al. and Jago et al. references also do not disclose or suggest the desirability of sending *service requests for operational servicing* of the diagnostic apparatus to a remote service facility or *exchanging data* between the service facility and the diagnostic apparatus. The Examiner has not pointed to any suggestion in the references or in any other art of record for these recited features, particularly in combination.

Accordingly, the cited references fail to disclose *all* of the recited features of the instant claim. Because the Examiner has failed to show that the cited references disclose *all* of the recited features, as well as a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention obvious in light of the cited reference, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, independent claim 1 and its respective dependent claims 2 through 7 are believed to be patentable over Jago et al. in view of Friz et al.

Claim 8

Claim 8 recites the following:

An apparatus for providing service to medical diagnostic systems, the apparatus comprising:
a plurality of medical diagnostic systems, each diagnostic system including a diagnostic station, a station interface for accessing data from the station, an operator interface for initiating service requests for operational servicing of the diagnostic system, and communications circuitry for transmitting and receiving data; and
a service facility linked to the plurality of medical diagnostic systems via a network, the service facility including a server for transmitting data to and receiving data from the plurality of medical diagnostic systems via the network.

In the Official Action, the Examiner specifically stated:

Claim 8, Jago-Friz discloses the apparatus in claim 8 as discussed in claim 2, including a plurality of diagnostic apparatus (Jago, 200, 202 Fig. 1).

Claim 2, Jago-Friz discloses the diagnostic apparatus includes a network browser user interface for defining the service request originated by the server and transmitted by the network communications module (Browser 100, Fig. 1; col. 8, lines 49-57).

The Examiner's rejection of claim 8 fails for at least two reasons. First, the combination fails to include all of the recited features, such as the claimed "initiating service requests for operational servicing of the diagnostic system." Second, the Examiner has failed to provide support for the motivation or suggestion to combine the references.

Recited Features Missing from Claim 8

The service request initiating feature is recited in claim 8 in exactly the same formulation as in claim 1 discussed above. As discussed above, with the Examiner's admission that the Jago et al. reference fails to disclose the *for operational servicing of*

the diagnostic system, the recited feature must be found in the Friz et al. reference for the rejection to stand. Thus, again, the Examiner does not suggest, nor do the cited references support, a conclusion that the *initiating a service request for operational servicing of the diagnostic system* of the cited invention is equivalent to the raw data pulled from the imagers in the Friz et al. reference. In fact, the operation of the system in the Friz et al. reference is not equivalent to the recited feature because the imagers do not initiate any communication, but rely on the performance monitoring system to pull the data. As discussed above, the operation of the system in the cited reference is in direct conflict and does not support the conclusion that the imagers initiate communication. Thus, the Friz et al. and Jago et al. references clearly do not disclose or teach the *initiating communication*.

The Appellants further stress that the present claim recites *a service request*, i.e., operational servicing information, which is transferred between the service facility and the diagnostic system. The Examiner has relied on the performance monitoring system in the cited reference to provide this recited feature. However, the Appellants reiterate that the Friz et al. reference does not disclose a *service request* as claimed in the present application. Application, page 8, lines 1-10. The Examiner also ignored the fact that the cited reference explicitly teaches raw data that is stored on the imager until the data is pulled by the performance monitoring system. In light of the explicit disclosure, it would be completely *unreasonable* to assume that one of ordinary skill in the art would leap from the pulling of raw data disclosed in the Friz et al. reference to the *service request* recited in the present claims. Thus, the Friz et al. and Jago et al. references clearly do not disclose or teach “initiating service requests for operational servicing of the diagnostic system.”

No Motivation or Suggestion to Combine the References

With regard to the lack of motivation or suggestion to combine the references, the services request initiating feature is recited in claim 8 in exactly the same formulation as

in claim 1 discussed above. Thus, again, the Examiner does not suggest, nor do the cited references support, a motivation to combine the references. As discussed above, the Examiner's unsupported assertion does not meet the evidentiary standard required for combining references under Section 103. Indeed, the Examiner has impermissibly relied on hindsight, using the teachings of Appellants, to find the suggestion to combine the alleged teachings of Friz et al. and Jago et al.

Accordingly, the cited reference fails to disclose *all* of the recited features of the instant claim. Because the Examiner has failed to show that the cited references disclose *all* of the recited features, as well as a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention obvious in light of the cited references, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, independent claim 8 and its respective dependent claims 9 through 14 are believed to be patentable over Jago et al. in view of Friz et al.

Claim 15

Claim 15 recites the following:

A system for remotely servicing medical diagnostic equipment, the system comprising:

a first medical diagnostic station of a first modality, the first medical diagnostic station including a service server for accessing data representative of a serviceable operational condition of the first station;

a second medical diagnostic station of a second modality different from the first modality, the second medical diagnostic station including a service server for accessing data representative of a serviceable operational condition of the second station;

a service facility remote from the first and second stations, the service facility including a server for interactively exchanging operational service data with the first and second stations.

In the Official Action, the Examiner specifically stated:

Claim 15, Jago-Friz discloses the invention substantially as described in claims 9 and 13.

Claims 9 and 10, Jago-Friz discloses at least two of the plurality of medical diagnostic systems include stations of the deferent modality types, wherein the types include magnetic resonance imaging stations, computer tomography station, X-ray stations or ultrasound stations (Friz. col. 1, lines 12-23).

Claim 13, Jago-Friz discloses each diagnostic system includes a memory circuit for storing log data and wherein the memory circuit transmits the log data and the communication circuitry is coupled to memory circuit and transmitting the log data to the service facility (Jago parameter storage 82, 84, fig.3, modern Ethernet, Fig. 2; report storage 24, Fig. 1; Friz sending error report Fig. 3; col. 10, line 59-col. 11, line 44).

The Examiner's rejection of claim 15 fails for at least two reasons. First, the combination fails to include all of the recited features, such as the claimed "a service server for accessing data representative of a serviceable operational condition of the first station," "a service server for accessing data representative of a serviceable operational condition of the second station," and "a server for interactively exchanging operational service data with the first and second stations." Each of the recited features is missing from the Examiner's suggested combination. Second, the Examiner has failed to provide support for the required motivation or suggestion to combine the references.

Recited Features Missing from Claim 15

First, with regard to the claimed "a service server for accessing data representative of a serviceable operational condition of the first station" or "a service server for accessing data representative of a serviceable operational condition of the second station," the Jago et al. and Friz et al. references have been carefully reviewed, and specifically the passages recited by the Examiner, but the references are absolutely devoid of any teaching or

suggestion of data that represents a *serviceable operational condition* of a medical diagnostic system, as recited in claim 15. As noted above, claim 15 recites “a serviceable operational condition of the first station” and “a serviceable operational condition of the first station.” Specifically, with regard to the Jago et al. reference, the Examiner admitted in the discussion of claim 1 that “Jago does not explicitly disclose the requested is an operational servicing of diagnostic apparatus service.” This admission applies to claim 1 as well as to claim 15, which recites, *inter alia*, “a serviceable operational condition.” Indeed, the Jago et al. reference is limited to techniques for *treating or diagnosing patients*. Jago et al., col. 7, lines 63-66. The communications disclosed by Jago et al. relate to patient diagnostic information, demographics, and patient exam reports. Jago et al., col. 8, line 49 to col. 9, line 16. Accordingly, the Jago et al. reference fails to disclose or suggest a *serviceable operational condition* as recited in the claims.

Furthermore, the Friz et al. reference fails to disclose the claimed “service server for accessing data representative of a serviceable operational condition of the first station” and “a service server for accessing data representative of a serviceable operational condition of the second station.” The Examiner asserts that the Friz et al. reference is directed to controlling the quality of images from laser imagers to overcome governmental regulation. Indeed, the Friz et al. reference is directed to controlling the quality of images that are generated from the laser imagers. Friz et al., col. 1, line 65 to col. 2, line 3; col. 2, lines 12-26, lines 43-45. However, the reference fails to disclose or suggest a diagnostic station including “a service server for accessing data representative of a serviceable operational condition of the first station” or “a service server for accessing data representative of a serviceable operational condition of the second station.” As discussed above with regard to the Friz et al. reference, the performance monitoring system does poll the laser imagers and pull the error logs and image test data from the laser imagers, but the data pulled from the laser imagers is raw data. Friz et al., col. 11, lines 50-56. The raw data that is pulled by the performance monitoring system does not relate to a *serviceable operational condition* as claimed in the present application. Application, page 3, lines 12-17. Thus, the Friz et al. and Jago et al. references clearly do not disclose or teach the recited feature of “a service

server for accessing data representative of a serviceable operational condition of the first station” or “a service server for accessing data representative of a serviceable operational condition of the second station,” as recited in the claims.

The cited references also fail to disclose “a server for interactively exchanging operational service data with the first and second stations.” As discussed above, the Jago et al. reference does not disclose “operational service data.” Moreover, the Examiner’s assertion is unsupportable for at least two reasons. First, the references do not teach or suggest a *service facility* related with *operational servicing* of medical diagnostic systems as claimed. Indeed, the systems taught by the references are not even related to a *service facility* as recited in the claims.

The image library 400 and the hospital information system (HIS) or radiology information system (RIS) 500 of Jago et al. are not related to the *operational service data* as claimed. In addition to the Examiner’s inaccurate portrayal of the *service facility*, data in the Jago et al. reference is actually image data related to the patient, not *operational service data* related to the first station. In fact, the reference solely refers to different types of images related to techniques for *treating or diagnosing patients*. Jago et al., col. 9, line 49 to col. 10, line 15. The systems 400 and 500 relate to patient exams rather than *operational servicing* of the diagnostic apparatus, as recited in claim 1. Jago et al., col. 10, lines 12-15. Accordingly, the Jago et al. reference fails to disclose or suggest a *operational service data* as recited in the claims.

Again, the Friz et al. reference does nothing to cure the deficiencies of the Jago et al. reference. As discussed above with regard to the Friz et al. reference, the performance monitoring system polls the laser imagers and pulls the error logs and image test data from the laser imagers. Friz et al., col. 11, lines 50-56. Indeed, the laser imagers are not “interactively exchanging operational service data with the first and second stations” as claimed, but simply store the data until the data is pulled by the performance monitoring system. As recited in the reference, the performance monitoring system controls the

accessing of data, not the laser imager, which merely stores the data. Friz et al., col. 11, lines 30-44. This exchange of data is not *interactive* as described in the present application. Application, page 8, lines 15-25. Moreover, as discussed above, the Friz et al. reference includes the drawbacks that the present application addresses with conventional scanners. Application, page 2, line 23 to page 3, line 23. Specifically, the problems relate to the fact that conventional scanners rely on the centralized service center, and are focused on defining service needs. Application, page 2, lines 24-27. In contrast, the diagnostic apparatus in the claimed subject matter *interactively exchanges data* with the first station and the second station. Thus, the Friz et al. and the Jago et al. references clearly do not disclose or teach the “a server for interactively exchanging operational service data with the first and second stations.”

No Motivation or Suggestion to Combine the References

With regard to the lack of motivation or suggestion to combine the references, the Examiner does not suggest, nor do the cited references support motivation for the suggested combination. As discussed above, the Examiner’s unsupported assertion does not meet the evidentiary standard required for combining references under Section 103. Indeed, the Examiner has impermissibly relied on hindsight, using the teachings of Appellants to find the suggestion to combine the alleged teachings of Friz et al. and Jago et al.

Accordingly, the cited references fail to disclose *all* of the recited features of the instant claim. Because the Examiner has failed to show that the cited references disclose *all* of the recited features, as well as a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention obvious in light of the cited reference, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, independent claim 15 and its respective dependent claims 16 through 21 are believed to be patentable over Jago et al. in view of Friz et al.

Claim 22

Claim 22 recites the following:

A method for providing remote service to a medical diagnostic system, the method comprising the steps of:
 originating a service request for operational servicing of the medical diagnostic system via a user interface in the medical diagnostic system;
 transmitting the service request to a service facility via a network connection;
 acknowledging receipt of the service request automatically by the service facility via an electronic message to the medical diagnostic system.

In the Official Action, the Examiner specifically stated:

Claim 22 recites limitations as claim 8.

Claim 8, Jago-Friz discloses the apparatus in claim 8 as discussed in claim 2, including a plurality of diagnostic apparatus (Jago, 200, 202 Fig. 1).

Claim 2, Jago-Friz discloses the diagnostic apparatus includes a network browser user interface for defining the service request originated by the server and transmitted by the network communications module (Browser 100, Fig. 1; col. 8, lines 49-57).

The Examiner's rejection of claim 22 fails for at least two reasons. First, the combination fails to include all of the recited features, such as the claimed "originating a service request for operational servicing of the medical diagnostic system," "transmitting the service request to a service facility," and "acknowledging receipt of the service request automatically by the service facility via an electronic message to the medical diagnostic system." Each of these recited features is missing from the Examiner's suggested combination. Second, the Examiner has failed to provide support for the motivation or suggestion to combine the references.

Failure to Provide Support for Alleged Elements that are Well Known in the Art

Essentially, the Examiner has taken Official Notice of facts outside of the record that the Examiner apparently believes are capable of demonstration as being “well-known” in the art. Specifically, the Examiner has repeatedly asserted that acknowledging receipt of the service request automatically by the service is “well known prior art.” However, the Examiner has failed to provide support for this assertion. Therefore, in accordance with M.P.E.P. § 2144.03, the Appellants seasonably traversed and challenged the Examiner’s apparent use of Official Notice. However, the Examiner has failed to provide any evidence to support the assertion, as requested. The Appellants still respectfully request objective evidence, such as an additional reference, in support of the Examiner’s position if the rejection is to be maintained. If the Examiner finds an additional reference and applies it in combination with the presently cited references, the Appellants further request that the Examiner specifically identify the portion of the newly cited reference that discloses the allegedly “well known” elements of the recited claims 22, as discussed above, or withdraw the rejection.

Recited Features Missing from Claim 22

The Examiner’s rejection of the claimed subject matter fails to include at least some of the recited features, such as “originating a service request for operational servicing of the medical diagnostic system,” “transmitting the service request to a service facility,” and “acknowledging receipt of the service request automatically by the service facility via an electronic message to the medical diagnostic system.” With regard to the recited feature of “originating a service request for operational servicing of the medical diagnostic system,” the feature in question is recited in claim 22 in exactly the same formulation as in claim 1 discussed above. With the Examiner’s admission that the Jago et al. reference fails to disclose *operational servicing of the diagnostic system*, the recited feature must be found in the Friz et al. reference for the rejection to stand. Here, again, the Examiner does not suggest, nor do the cited references support, a conclusion that the *originating a service request for operational servicing of the diagnostic system* as claimed is equivalent the raw data pulled from the laser imagers in the Friz et al. reference. In fact, the described

operation of the Friz et al. system demonstrates that the systems are not equivalent because the laser imagers do not initiate any communication, but rely on the performance monitoring system to pull the data. As discussed above, the operation of the system in the cited references is in direct conflict and does not support the conclusion that the imagers could or should *originate* communication.

The Appellants further stress that the present claim recites a *service request*, i.e., operational servicing information, which is transferred between the service facility and the diagnostic system. As discussed above, the Examiner has relied on the performance monitoring system in the cited reference to provide this support. However, the Appellants reiterate that the Friz et al. reference does not disclose a *service request* as claimed. Application, page 8, lines 1-10. The Examiner also ignored the fact that the cited reference explicitly teaches raw data that is stored on the imager until the data is pulled by the performance monitoring system. In light of the explicit disclosure, it would be completely *unreasonable* to assume that one of ordinary skill in the art would leap from the raw data disclosed in the Friz et al. reference to the *service request* recited in the present claims. Thus, the Friz et al. and the Jago et al. references clearly do not disclose or teach the recited feature of “originating a service request for operational servicing of the medical diagnostic system.”

The combination also fails to disclose, “transmitting the service request to a service facility.” As discussed above, the Examiner admitted that “Jago does not explicitly disclose the requested is an operational servicing of diagnostic apparatus service.” Indeed, the Jago et al. reference is limited to techniques for *treating or diagnosing patients*. Jago et al., col. 7, lines 63-66. Also, the Friz et al. reference fails to disclose, “transmitting the service request to a service facility.” As discussed above, the performance monitoring system polls the laser imagers and pulls the error logs and image test data. Friz et al., col. 11, lines 50-56. However, the data pulled is not a service request, but is merely raw data that is stored since the last polling period. Friz et al., col. 11, lines 55-57. Thus, even the combination of

these references fails to disclose the feature of “transmitting the service request to a service facility,” as recited in the claims.

In addition, the combination of the cited references fails to disclose “acknowledging receipt of the service request automatically by the service facility via an electronic message to the medical diagnostic system.” As discussed above with regard to the alleged elements that are “well known,” the Examiner recognized that the combination fails to include all of the recited features. In fact, the Examiner admitted that the combination of the Jago et al. and the Friz et al. teachings fail to disclose transmitting an acknowledgement message. Specifically, the Examiner stated with regard to the rejection of claim 18, which is the basis for the rejection of claim 22, that “it does not explicitly disclose transmit an acknowledgement message.” Moreover, the Appellants also stress that neither reference teaches or suggests a *service request* as recited in claim 22. Furthermore, the recited feature of “acknowledging receipt of the service request automatically” is a patentably distinct feature by way of its association with the foregoing feature of *service request for operational servicing*. Thus, the combination of the Jago et al. reference and the Friz et al. reference clearly does not disclose or teach “acknowledging receipt of the service request automatically by the service facility via an electronic message to the medical diagnostic system.”

No Motivation or Suggestion to Combine the References

With regard to the lack of motivation or suggestion to combine the references, claim 22 includes features recited in exactly the same formulation as in claim 1 discussed above. Thus, again, the Examiner does not suggest, nor do the cited references support, a conclusion that the combination is suggested in the references. As discussed above, the Examiner’s unsupported assertion does not meet the evidentiary standard required for combining references under Section 103. Indeed, the Examiner has impermissibly relied on hindsight, using the teachings of Appellants to find the suggestion to combine the teachings of Friz et al. and Jago et al.

Accordingly, the cited references fail to disclose *all* of the recited features of the instant claim. Because the Examiner has failed to show that the cited references disclose *all* of the recited features, as well as a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention obvious in light of the cited reference, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, independent claim 22 and its respective dependent claims 23 through 28 are believed to be patentable over Jago et al. in view of Friz et al.

Claim 29

Claim 29 recites the following:

A method for exchanging service data between a plurality of medical diagnostic systems and a central service facility, the method comprising the steps of:
 composing a service message on a medical diagnostic system, the service message relating to operational servicing of the medical diagnostic system;
 linking the medical diagnostic system to a remote service facility via a network connection;
 transmitting the service message from the medical diagnostic system to the remote service facility for remote operational servicing of the medical diagnostic system; and
 automatically replying to the service message by the service facility to the medical diagnostic system via a return electronic message.

In the Official Action, the Examiner specifically stated:

Claim 29 recites similar limitation as in the method in claim 25.

Claim 25 recites limitations as claim 18.

Claims 18-19, Jago-Friz discloses the invention substantially as described in claim 17. It does not explicitly disclose transmit an acknowledgment message.

Official Notice (see MPEP § 2144.03 Reliance on “Well Known” Prior Art) is taken that sending acknowledge was well known in the art. The known feature has been commonly utilized in several fields of data communication, such acknowledge has been utilized in Transport Control Protocol (TCP) to have a reliable data transmission, or in the e-mails utilized acknowledgement, e.g., auto-reply mail, to ensure that the mail has been delivery to eliminate disputing, or computer has been sued an acknowledge signal for avoiding delay in data communication between its devices.

Generally, most of network and/or computer equipment have been designed to wait for signaling response when sending out any form of data, the waiting period would be prolonged until timeout occurring prior to take appropriate actions. Such a waiting will create unnecessary delay their operation and degrade their efficiency. Further, in the servicing environment, one factor that has significantly impacted to the service is requesting service does not reach its destination. The loss of service request transforms to a poor service performance and extensive downtime, which could end up with poor performance and endanger patient health that mead lead to a litigation.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the use of acknowledge message with Jago-Friz. Because, sending acknowledge would minimize or perhaps eliminate the above problems.

The Examiner’s rejection of claim 29 fails for at least two reasons. First, the combination fails to include all of the recited features, such as the claimed “composing a service message on a medical diagnostic system, the service message relating to operational servicing of the medical diagnostic system,” “transmitting the service message from the medical diagnostic system to the remote service facility for remote operational servicing of the medical diagnostic system,” and “automatically replying to the service message by the service facility to the medical diagnostic system via a return electronic message.” Each of the recited features is missing from the

Examiner's suggested combination. Second, the Examiner has failed to provide support for a motivation or suggestion to combine the references.

Failure to Provide Support for Alleged Elements that are Well Known in the Art

Essentially, the Examiner has taken Official Notice of facts outside of the record that the Examiner apparently believes are capable of demonstration as being "well-known" in the art. Specifically, the Examiner has repeatedly asserted that acknowledging receipt of the service request automatically by the service is "well known prior art." However, the Examiner has failed to provide support for this assertion. Therefore, in accordance with M.P.E.P. § 2144.03, the Appellants seasonably traversed and challenged the Examiner's apparent use of Official Notice. However, the Examiner has failed to provide any evidence to support the assertion, as requested. The Appellants still respectfully request objective evidence, such as an additional reference, in support of the Examiner's position if the rejection is to be maintained. If the Examiner finds an additional reference and applies it in combination with the presently cited references, the Appellants further request that the Examiner specifically identify the portion of the newly cited reference that discloses the allegedly "well known" elements of the recited claims 22, as discussed above, or withdraw the rejection.

Recited Features Missing from Claim 29

The cited references of the Examiner's rejection fail to disclose at least some of the recited features claimed, such as "composing a service message on a medical diagnostic system, the service message relating to operational servicing of the medical diagnostic system," "transmitting the service message from the medical diagnostic system to the remote service facility for remote operational servicing of the medical diagnostic system," and "automatically replying to the service message by the service facility to the medical diagnostic system via a return electronic message." With regard to the feature of "composing a service message on a medical diagnostic system, the service message relating to operational servicing of the medical diagnostic system," the features in question is recited in claim 29 in a similar formulation as discussed above. With the Examiner's

admission that the Jago et al. reference fails to disclose *operational servicing of the diagnostic system*, the recited feature must be found in the Friz et al. reference for the rejection to stand. Again, however, the Examiner does not suggest, nor do the cited references support, that *composing a service message* with the *service message relating to operational servicing of the medical diagnostic system* as claimed, is equivalent the raw data pulled from the laser imagers in the Friz et al. reference. In fact, the Friz et al. reference itself suggests that the systems are not equivalent, because the imagers do not initiate any communication, but rely on the performance monitoring system to pull the data. As discussed above, the operation of the system in the cited reference is in direct conflict and does not support the conclusion that the imagers *compose a service message*.

The Appellants further stress that the present claim recites *a service message*, i.e., operational servicing information, which is transferred between the service facility and the diagnostic system. As discussed above, the Examiner has relied on the performance monitoring system in the cited reference to provide this support. However, the Appellants reiterate that the Friz et al. reference does not disclose a *service message* as claimed. Application, page 18, lines 14-21; page 19, lines 15-20; page 20, lines 20-28. The Examiner also ignored the fact that the cited reference explicitly teaches that raw data is stored on the imager until the data is pulled by the performance monitoring system. In light of the explicit disclosure, it would be completely *unreasonable* to assume that one of ordinary skill in the art would leap from the raw data disclosed in the Friz et al. reference to the *service message* recited in the present claims. Thus, the combination of the Jago et al. and the Friz et al. references clearly does not disclose or teach “composing a service message on a medical diagnostic system, the service message relating to operational servicing of the medical diagnostic system.”

The combination also fails to disclose “transmitting the service message from the medical diagnostic system to the remote service facility for remote operational servicing of the medical diagnostic system.” As discussed above, the Examiner admitted, “Jago does not explicitly disclose the requested is an operational servicing of diagnostic apparatus service.”

Indeed, the Jago et al. reference is limited to techniques for *treating or diagnosing patients*. Jago et al., col. 7, lines 63-66. Also, the Friz et al. reference fails to disclose “transmitting the service message from the medical diagnostic system to the remote service facility.” As discussed above, the performance monitoring system polls the laser imagers and pulls the error logs and image test data. Friz et al., col. 11, lines 50-56. In this reference, the data pulled is not a service message, but is merely raw data that is stored since the last polling period. Friz et al., col. 11, lines 55-57. Thus, even the combination of these references fails to disclose a *service message* as claimed, that is *transmitted* to the *service facility* from a *medical diagnostic system*.

In addition, the combination of the cited references fails to disclose “automatically replying to the service message by the service facility to the medical diagnostic system via a return electronic message.” As discussed above with regard to the alleged elements that are “well known,” the Examiner recognized that the combination fails to include all of the recited features. In fact, the Examiner admitted that the combination of the Jago et al. reference and the Friz et al. reference fails to disclose transmitting an acknowledgement message. Specifically, the Examiner stated with regard to the rejection of claim 18, which is the basis for the rejection of claim 29, that “it does not explicitly disclose transmit an acknowledgement message.” Moreover, the Appellants also stress that neither reference teaches or suggests a *service message* as recited in claim 29. The recited feature of “automatically replying to the service message by the service facility to the medical diagnostic system via a return electronic message” is a patentably distinct feature by way of its association with the foregoing feature of *service message* for *operational servicing*. Thus, the combination of the Jago et al. reference and the Friz et al. reference clearly does not disclose or teach “automatically replying to the service message by the service facility to the medical diagnostic system via a return electronic message,” as recited in the claims.

No Motivation or Suggestion to Combine the References

With regard to the lack of motivation or suggestion to combine the references, the Examiner does not suggest, nor do the cited references support a motivation to make the suggested combination. As discussed above, the Examiner's unsupported assertion does not meet the evidentiary standard required for combining references under Section 103. Indeed, the Examiner has impermissibly relied on hindsight, using the teachings of Appellants to find the suggestion to combine the alleged teachings of Friz et al. and Jago et al.

Accordingly, the cited references fail to disclose *all* of the recited features of the instant claim. Because the Examiner has failed to show that the cited references disclose *all* of the recited features, as well as a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention obvious in light of the cited reference, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, independent claim 29 and its respective dependent claims 30 through 35 are believed to be patentable over Jago et al. in view of Friz et al.

Claim 36

Claim 36 recites the following:

A method for servicing a plurality of medical diagnostic systems, the method comprising the steps of:
generating a first service request message in a first diagnostic system of a first modality for operational servicing of the first diagnostic system;
generating a second service request message in a second diagnostic system of a second modality different from the first modality for operational servicing of the second diagnostic system;
transmitting the first and second service request messages to a service facility remote from the first and the second diagnostic systems; and

transmitting acknowledgment messages from the service facility to the first and second diagnostic system in response to the first and second service request messages.

In the Official Action, the Examiner specifically stated:

Claims 36 and 37 are method claims corresponding to the system in claims 15 and 16, respectively.

Claim 15, Jago-Friz discloses the invention substantially as described in claims 9 and 13.

Claims 9 and 10, Jago-Friz discloses at least two of the plurality of medical diagnostic systems include stations of the deferent modality types, wherein the types include magnetic resonance imaging stations, computer tomography station, X-ray stations or ultrasound stations (Friz. col. 1, lines 12-23).

Claim 13, Jago-Friz discloses each diagnostic system includes a memory circuit for storing log data and wherein the memory circuit transmits the log data and the communication circuitry is coupled to memory circuit and transmitting the log data to the service facility (Jago parameter storage 82, 84, fig.3, modern Ethernet, Fig. 2; report storage 24, Fig. 1; Friz sending error report Fig. 3; col. 10, line 59-col. 11, line 44).

A first issue with regard to the Examiner's rejection relates to the confusion caused by apparent inconsistent bases for the rejections in the Office Action dated April 9, 2002. The Examiner stated that the claims 36-44 were rejected under the combination of the Jago et al. and the Friz et al. references. Yet in the specific detail regarding the rejection of claims 42 and 43, the Examiner cites the combination of Jago et al., Friz et al., and Pinsky et al. Moreover, the Examiner does not even cite to the Pinsky et al. reference in the specific detail, which adds to the confusion. The Appellants request that the Examiner clarify which references the Examiner is asserting to support the rejection of these claims.

Despite the lack of clarity in the Office Action, the Examiner's rejection of claim 36 fails for at least two reasons. First, the combination fails to include all of the recited features, such as the claimed "generating a first service request message in a first diagnostic system," "generating a second service request message in a second diagnostic system," "transmitting the first and second service request messages to a service facility," and "transmitting acknowledgment messages from the service facility to the first and second diagnostic system in response to the first and second service request messages." Each of these recited features is missing from the Examiner's suggested combination. Second, the Examiner has failed to provide support for the motivation or suggestion to combine the references.

Failure to Provide Support for Alleged Elements that are Well Known in the Art

Essentially, the Examiner has taken Official Notice of facts outside of the record that the Examiner apparently believes are capable of demonstration as being "well-known" in the art. Specifically, the Examiner has repeatedly asserted that acknowledging receipt of the service request automatically by the service is "well known prior art." However, the Examiner has failed to provide support for this assertion. Therefore, in accordance with M.P.E.P. § 2144.03, the Appellants seasonably traversed and challenged the Examiner's apparent use of Official Notice. However, the Examiner has failed to provide any evidence to support the assertion, as requested. The Appellants still respectfully request objective evidence, such as an additional reference, in support of the Examiner's position if the rejection is to be maintained. If the Examiner finds an additional reference and applies it in combination with the presently cited references, the Appellants further request that the Examiner specifically identify the portion of the newly cited reference that discloses the allegedly "well known" elements of the recited claims 22, as discussed above, or withdraw the rejection.

Recited Features Missing from Claim 36

The Examiner's proposed combination fails to include at least some of the feature claimed, such as "generating a first service request message in a first diagnostic system,"

“generating a second service request message in a second diagnostic system,” “transmitting the first and second service request messages to a service facility,” and “transmitting acknowledgment messages from the service facility to the first and second diagnostic system in response to the first and second service request messages.” With regard to the recited feature of “generating a first service request message in a first diagnostic system” and “generating a second service request message in a second diagnostic system,” the features in question are recited in claim 36 in exactly the same formulation as in claim 1 discussed above. With the Examiner’s admission that the Jago et al. reference fails to disclose *operational servicing of the diagnostic system*, the features must be found in the Friz et al. reference for the rejection to stand. Thus, again, the Examiner does not suggest, nor do the cited references support, a conclusion that the *generating a service request message for operational servicing of the diagnostic system* of the cited invention is equivalent to the raw data pulled from the imagers in the Friz et al. reference. In fact, the operation of the system in the Friz et al. reference suggests that the systems are not equivalent because the laser imagers do not initiate any communication, but rely on the performance monitoring system to pull the data. Again, this is in direct conflict and does not support the conclusion that the imagers initiate communication.

The Appellants further stress that the present claim recites *a service request message*, i.e., operational servicing information, which is transferred between the service facility and the diagnostic system. The Examiner has relied on the performance monitoring system in the cited reference to provide this support. However, the Appellants reiterate that the Friz et al. reference does not disclose a service request as claimed. Application, page 27, line 24 to page 28, line 15. The Examiner also ignored the fact that the cited references explicitly teach raw data that is stored on the imager until the data is pulled by the performance monitoring system. In light of this explicit disclosure, it would be completely *unreasonable* to assume that one of ordinary skill in the art would leap from the raw data disclosed in the Friz et al. reference to the *service request message* recited in the present claims. Thus, the combination of the Jago et al. and the Friz et al. references clearly does not disclose or teach “generating a first service request

message in a first diagnostic system” and “generating a second service request message in a second diagnostic system,” as recited in the claims.

The combination also fails to disclose “transmitting the first and second service request messages to a service facility.” As discussed above, the Examiner admitted, “Jago does not explicitly disclose the requested is an operational servicing of diagnostic apparatus service.” Indeed, the Jago et al. reference is limited to techniques for *treating or diagnosing patients*. Jago et al., col. 7, lines 63-66. Also, the Friz et al. reference fails to disclose, “transmitting the first and second service request messages to a service facility.” As discussed above, the performance monitoring system polls the laser imagers and pulls the error logs and image test data. Friz et al., col. 11, lines 50-56. The data pulled is not a service request, but is merely raw data that is stored since the last polling period. Friz et al., col. 11, lines 55-57. Thus, even the combination of these references fails to disclose the recited features of “transmitting the first and second service request messages to a service facility.”

In addition, the combination of the cited references could not include “transmitting acknowledgment messages from the service facility to the first and second diagnostic system in response to the first and second service request messages.” As discussed above with regard to the alleged elements that are “well known,” the Examiner recognized that that the combination failed to include all of the recited features. In fact, the Examiner admitted that the combination of the Jago et al. reference and the Friz et al. reference fails to disclose, “transmit an acknowledgement message.” Specifically, the Examiner stated with regard to the rejection of claim 18, which is the basis for the rejection of claim 36, that “it does not explicitly disclose transmit an acknowledgement message.” Moreover, the Appellants also stress that neither reference teaches or suggests a service request as recited in claim 36. Further, the recited feature of “transmitting acknowledgment messages from the service facility to the first and second diagnostic system in response to the first and second service request messages” is a patentably distinct feature by way of its association with the foregoing feature of a *service request message for operational*

servicing. Thus, the combination of the Jago et al. reference and the Friz et al. reference clearly does not disclose or teach the feature of “transmitting acknowledgment messages from the service facility to the first and second diagnostic system in response to the first and second service request messages,” as recited in the claims.

No Motivation or Suggestion to Combine the References

With regard to the lack of motivation of suggestion to combine the references, claim 36 recites features in exactly the same formulation as in claim 1 discussed above. As discussed above, the Examiner’s unsupported assertion does not meet the evidentiary standard required for combining references under Section 103. Indeed, the Examiner has impermissibly relied on hindsight, using the teachings of Appellants to find the suggestion to combine the alleged teachings of Friz et al. and Jago et al.

Accordingly, the cited references fail to disclose *all* of the recited features of the instant claim. Because the Examiner has failed to show that the cited references disclose *all* of the recited features, as well as a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention obvious in light of the cited reference, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, independent claim 36 and its respective dependent claims 37 through 44 are believed to be patentable over Jago et al. in view of Friz et al.

Issue No. 2:

The Examiner rejected claims 7, 14, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Jago et al. (U.S. Patent No. 5,938,607) in view of Friz et al. (U.S. Patent No. 5,786,994) and Love et al. (U.S. Patent No. 5,629,871). The Examiner specifically stated:

Claim 7, Jago-Friz discloses the invention substantially as discussed in claim 1, but fails to disclose scheduling operational service of the diagnostic system.

However, in the same field of endeavor, Love teaches an improvement system for laboratory equipment, which capable of monitoring failure of the equipment and scheduling maintenance and repair in order to avoid costly maintenance (abstract, Col., 2, lines 11-30; Fig. 6-8).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate scheduling service as taught by Love with Jago-Friz. Because scheduling service, which known in the art as preventive maintenance would prevent unexpected failure, which will lead to endanger patient health, extensive loss of time and revenue, and reducing repair cost.

As a preliminary matter for Issue No. 2 and as discussed above, it should be noted that independent claims 1, 8, and 22 are each directed to a different aspect of the present invention. Depending from claim 1, claim 7 recites that the service facility includes a scheduling circuit for scheduling operational service of the diagnostic system. Depending from claim 8, claim 14 further recites that the log data is transmitted in response to a prompt from the service facility. Furthermore, depending from claim 22, claim 24 further recites that operational data is transmitted from the medical diagnostic system to the service facility. Thus, the claims 7, 14, and 22 each recite subject matter that is directed to a different aspect of the present invention.

Appellants respectfully traversed this rejection. The recited claims depend directly or indirectly from the base claims discussed above. The claims are believed to be clearly allowable over the cited references by virtue of this dependency. Appellants stress that the Love et al. reference does nothing to obviate the deficiencies of the Jago et al. and Friz et al. references as regards the failure to teach or suggest the recited features discussed above or to provide a motivation to combine the references. Accordingly, the Appellants respectfully request reversal of the rejection of claims 7, 14, and 24 under 35 U.S.C. § 103(a).

Appellants also stress the patentably distinct features of the present technique, as set forth above with respect to Issue No. 1. As discussed, the requisite suggestion to modify the Jago et al. reference with the teaching of the Friz et al. reference to obtain the claimed method has not been shown. The Examiner has not asserted that the additional Love et al. reference provides such a suggestion, but rather has cited the additional reference to address dependent claim recitations. Therefore, Appellants submit that this rejection also is deficient in demonstrating a *prima facie* case of obviousness for the same reasons the Jago et al. and Friz et al. reference combination fails. Accordingly, Appellants respectfully request reversal of this rejection.

9. **CONCLUSION**

In view of the above remarks, Appellants respectfully submit that the Examiner has provided no supportable position or evidence that claims 1-44 are obvious under Section 103(a). Accordingly, Appellants respectfully request that the Board find claims 1-44 patentable over the prior art of record and withdraw all outstanding rejections.

As this is a revised Appeal Brief and a filing fee was paid with the original Appeal Brief, no additional fee is believed due at this time. However, the Commissioner is authorized to charge any additional fees which may be required to Deposit Account No. 07-0845, GEMS:0029/YOD (15-SV-4769).

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Respectfully submitted,



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APPENDIX OF CLAIMS ON APPEAL

1. A system for servicing a medical diagnostic apparatus, the system comprising:
 - a diagnostic apparatus including a service server for originating a service request for operational servicing of the diagnostic apparatus and a network communications module for transmitting the service request;
 - a service facility remote from the diagnostic apparatus, the service facility including a network server for receiving the service request and exchanging data with the diagnostic apparatus in response to the service request.
2. The system of claim 1, wherein the diagnostic apparatus includes a network browser user interface for defining the service request originated by the server and transmitted by the network communications module.
3. The system of claim 1, further comprising a data storage device coupled to the network server, the data storage device storing service data representative of identifying or operational parameters of the diagnostic apparatus.
4. The system of claim 1, wherein the data includes data representative of a diagnostic apparatus type and location.
5. The system of claim 1, further comprising at least one field service unit, the field service unit including a network browser and a network communications module for linking the field service unit to the service facility network server.
6. The system of claim 1, wherein the service facility includes a messaging circuit configured to formulate and transmit a message to the diagnostic apparatus in response to the service request.

7. The system of claim 1, wherein the service facility includes a scheduling circuit for scheduling operational service of the diagnostic system in response to the service request.

8. An apparatus for providing service to medical diagnostic systems, the apparatus comprising:

a plurality of medical diagnostic systems, each diagnostic system including a diagnostic station, a station interface for accessing data from the station, an operator interface for initiating service requests for operational servicing of the diagnostic system, and communications circuitry for transmitting and receiving data; and

a service facility linked to the plurality of medical diagnostic systems via a network, the service facility including a server for transmitting data to and receiving data from the plurality of medical diagnostic systems via the network.

9. The apparatus of claim 8, wherein at least two of the plurality of medical diagnostic systems include stations of different modality types.

10. The apparatus of claim 9, wherein the different modality types include magnetic resonance imaging stations, computed tomography stations, x-ray stations or ultrasound stations.

11. The apparatus of claim 8, wherein at least two of the medical diagnostic systems are coupled to a management station via an intranet in a medical facility, and wherein the management station is linked to the service facility via the network.

12. The apparatus of claim 8, wherein the communications circuitry is coupled to the station interface for transmitting data representative of station operating parameters to the service facility.

13. The apparatus of claim 8, wherein each diagnostic system includes a memory circuit for storing log data representative of serviceable operational conditions occurring in the diagnostic system, and wherein the communications circuitry is coupled to memory circuit and transmits the log data to the service facility.

14. The apparatus of claim 13, wherein the log data is transmitted in response to a prompt from the service facility.

15. A system for remotely servicing medical diagnostic equipment, the system comprising:

a first medical diagnostic station of a first modality, the first medical diagnostic station including a service server for accessing data representative of a serviceable operational condition of the first station;

a second medical diagnostic station of a second modality different from the first modality, the second medical diagnostic station including a service server for accessing data representative of a serviceable operational condition of the second station;

a service facility remote from the first and second stations, the service facility including a server for interactively exchanging operational service data with the first and second stations.

16. The system of claim 15, wherein the first and second modalities are selected from a group consisting of magnetic resonance imaging systems, computed tomography systems, x-ray systems and ultrasound systems.

17. The system of claim 15, wherein the first and second stations each include an operator interface for initiating a service request for operational servicing of the respective station and a communications circuit for transmitting the service request to the service facility.

18. The system of claim 17, wherein the service facility server is configured to transmit an acknowledgment message to the first or the second station in response to the service request from the respective station.

19. The system of claim 17, wherein the service facility server is configured to prompt data representative of a serviceable operational condition in response to the service request from the first or the second station, and wherein the first and the second stations are configured to transmit the data representative of the serviceable operational condition in response to the prompt.

20. The system of claim 15, wherein the serviceable operational condition includes an operational malfunction in an imaging sequence in the first or the second station.

21. The system of claim 15, wherein the serviceable operational condition includes a request for operator useable information.

22. A method for providing remote service to a medical diagnostic system, the method comprising the steps of:

originating a service request for operational servicing of the medical diagnostic system via a user interface in the medical diagnostic system;

transmitting the service request to a service facility via a network connection;

acknowledging receipt of the service request automatically by the service facility via an electronic message to the medical diagnostic system.

23. The method of claim 22, comprising the further step of transmitting operational data from the medical diagnostic system to the service facility representative of a potential operational malfunction of the medical diagnostic system.

24. The method of claim 23, wherein the operational data is transmitted from the medical diagnostic system to the service facility in response to a prompt by the service facility.

25. The method of claim 24, wherein the prompt is generated by the service facility automatically in response to the service request.

26. The method of claim 22, comprising the further step of transmitting from the medical diagnostic system data representative of the medical diagnostic system type and identification.

27. The method of claim 22, wherein the service request is generated through a preconfigured browser page accessible on the user interface.

28. The method of claim 22, comprising the further step of displaying a visual indicia at the medical diagnostic system indicating receipt of the electronic message from the service facility.

29. A method for exchanging service data between a plurality of medical diagnostic systems and a central service facility, the method comprising the steps of:

- composing a service message on a medical diagnostic system, the service message relating to operational servicing of the medical diagnostic system;
- linking the medical diagnostic system to a remote service facility via a network connection;
- transmitting the service message from the medical diagnostic system to the remote service facility for remote operational servicing of the medical diagnostic system; and
- automatically replying to the service message by the service facility to the medical diagnostic system via a return electronic message.

30. The method of claim 29, wherein the service message is composed via a user interface.

31. The method of claim 29, wherein the service message includes data uniquely identifying the medical diagnostic system.

32. The method of claim 31, comprising the further step of automatically accessing electronic records relating to the medical diagnostic system by the service facility in response to the service message.

33. The method of claim 32, wherein the electronic records include data representative of an operational service subscriber status of the medical diagnostic system.

34. The method of claim 32, wherein the electronic records include data representative of operational service history for the medical diagnostic system.

35. The method of claim 29, comprising the further steps of:
determining at the service facility log data required to reply to the service message;
automatically linking the service facility to the medical diagnostic system via a network connection; and
transmitting the log data from the medical diagnostic system to the service facility.

36. A method for servicing a plurality of medical diagnostic systems, the method comprising the steps of:

generating a first service request message in a first diagnostic system of a first modality for operational servicing of the first diagnostic system;

generating a second service request message in a second diagnostic system of a second modality different from the first modality for operational servicing of the second diagnostic system;

transmitting the first and second service request messages to a service facility remote from the first and the second diagnostic systems; and

transmitting acknowledgment messages from the service facility to the first and second diagnostic system in response to the first and second service request messages.

37. The method of claim 36, wherein the first and second modalities are selected from a group including magnetic resonance imaging systems, computed tomography imaging systems, x-ray imaging systems and ultrasound imaging systems.

38. The method of claim 36, including the further step of displaying operator perceptible indicia at the first and second diagnostic systems indicating receipt of the acknowledgment messages.

39. The method of claim 36, wherein the first and second service request messages include data uniquely identifying the respective diagnostic system.

40. The method of claim 36, comprising the further steps of:
establishing a network link between the service facility and the first and second diagnostic systems; and

transmitting operational parameter data from the first and second diagnostic systems to the service facility, the operational parameter data including information indicative of a serviceable operational condition.

41. The method of claim 36, comprising the further steps of:
establishing a network link between the service facility and the first and second diagnostic systems, and

transmitting operational service data from the service facility to the first and second diagnostic systems in response to the first and second service request messages.

42. The method of claim 41, wherein the operational service data includes configuration parameter data for the respective diagnostic system.

43. The method of claim 41, wherein the operational service data includes operator instructions adapted to the respective modality of the respective diagnostic system.

44. The method of claim 36, wherein the service facility includes a plurality of service facilities disposed at locations remote from one another.